

# Awareness among Final Year and Postgraduate Dental Students on Bleeding Disorders': A Questionnaire Based Study

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**Abstract:** Awareness among final year and postgraduate dental students on bleeding disorders': A questionnaire based study. **Aim:** the main aim was to find how well aware final year and postgraduate dental students were on bleeding disorders and their prevention. **Objective:** The main objective was to see how well aware final year and postgraduate dental students were on bleeding disorders among their patients and its causative factors and importance during the course of treatment. This was done with the help of a questionnaire based study and evaluate it to get a better idea on the awareness. **Background:** Oral care providers must be aware of the impact of bleeding disorders on the management of dental patients. Initial recognition of a bleeding disorder, which may indicate the presence of a systemic pathologic process, may occur in dental practice. Further on in order we see that this is only best accomplished by practitioners who are knowledgeable about the pathology, complications and treatment options associated with these conditions. So this helps the dentists to carry on with prophylactic, restorative and surgical dental care of patients with bleeding disorders. **Reason:** the reason why this topic was taken was to see common bleeding disorders and their effects on the delivery of oral health care.

**Keywords:** bleeding disorders, patients, dentists, awareness

## 1. Introduction

Dentists must be aware of the very impact of bleeding disorders on the management and treatment of their patients. Proper dental and medical examination of patients is necessary before treatment, especially if an invasive dental procedure is planned<sup>1</sup>. Bleeding disorders are a set of disorders that share the inability to form a proper blood clot. They are set apart and mainly characterised by continued bleeding after injury, surgery, trauma or menstruation. Sometimes the bleeding is spontaneous, without a known or identifiable cause<sup>2</sup>. Improper clotting can be caused by defects in blood components such as platelets and/or clotting proteins, also called clotting factors

Bleeding disorders mainly involves conditions in which the ability of blood vessels, platelets, and coagulation agents to establish homeostasis is changed<sup>3</sup>. Bleeding disorders are widely classified as Inherited and Acquired bleeding disorders. Inherited bleeding disorders are basically caused by quantitative and qualitative alterations of either platelets or plasma proteins involved in coagulation and fibrinolysis<sup>4</sup>. Acquired bleeding disorders are caused by intake of certain medicines and special systemic diseases. Hemophilia A, hemophilia B and von Will brand's disease are the commonly encountered congenital coagulation defect disorders. Von Willebrand disease is the most common inherited coagulation disorder which results from deficiency of Von Willebrand factor and involves nearly 1% of society's population<sup>5</sup>.

When a patient First comes to dental clinic and is to undergo any dental procedure and is a patient with a bleeding disorder the dental physician must run a set of coagulative tests prior to dentistry interventions and the changes that shall be applied to anticoagulants, The reason is the fact that physicians under such circumstances must assess the ability

of patients to reach post-operative homeostasis as well as likelihood of thrombosis and emboli occurrence<sup>6</sup>.

Furthermore, prophylactic, restorative and surgical dental care of patients with bleeding disorders is best accomplished by dental students who are knowledgeable about the pathology and treatment options associated with these conditions. It also plays a significant role in reducing potential complications which might arise while performing invasive dental procedure<sup>7</sup>.

Local homeostatic agents provide control of external bleeding by enhancing or accelerating the natural clotting process through various physical reactions between the agent and blood or by mechanical means. A general knowledge of the coagulation process will allow the clinician to better understand how the homeostatic agents work and when they should be applied.<sup>8</sup>

More over Taking into consideration the limited number of studies that has been performed and is available on relative dentists awareness on bleeding disorders and coagulation tests ,this study has assessed the level of relative dentists knowledge on bleeding disorders in order to evaluate effectiveness and promote instructional knowledge through the assessment of the acquired results.

## 2. Materials and Methods

A cross sectional questionnaire survey was carried out to assess the knowledge on bleeding disorders among final year and post graduate dental students. Convenient sample size of 200 dental students was decided and data was collected by questionnaire. From them about 125 Interns and 75 post graduate dental students filled the questionnaire. From them there were about 100 female students and 100 male students. This questionnaire was approved by the scientific research board of SAVEETHA dental college. A

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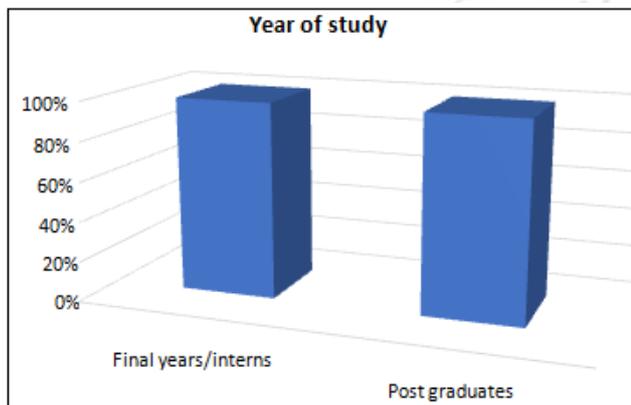
specially designed questionnaire consisting of close ended questions was said to assess the knowledge on bleeding disorders among final year and PG dental students .this questionnaire was distributed to the final year and post graduate dental students in Chennai . The name and Identity of the students was maintained anonymous.all the students were given a half an hour to one hour time to complete the questionnaire .the completed questionnaires were immediately collected and were analysed.

### 3. Data Analysis

The data entry was done by Microsoft Excel. The collected data was analysed using descriptive analysis.

**Table 1:** Shows the number of students from each year who have answered the questionnaire

Year of Study	No.of Students
Final years/interns	120
Post graduates	80



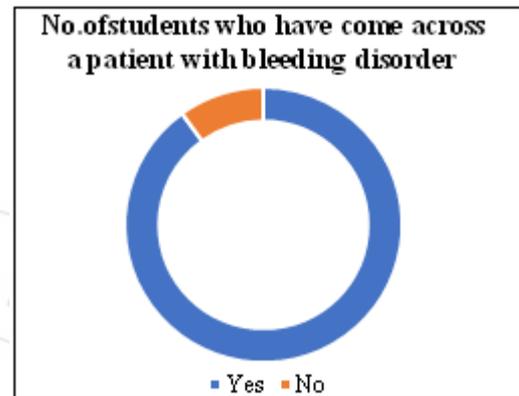
**Figure 1:** Graphical analysis of table1

**Table 2:** Shows the gender wise classification of the participants in the survey

Gender	No.of students
Male	100
Female	100

**Table 3:** Shows the tabulation of data for question1

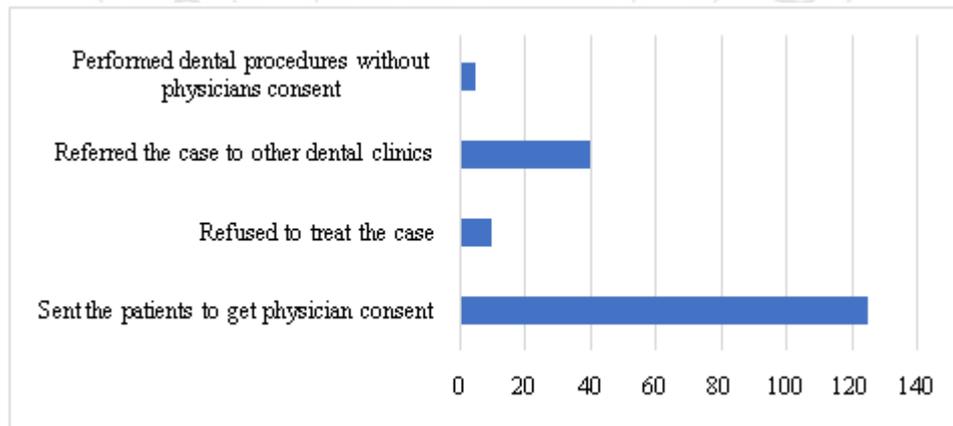
Have you come across a patient with a bleeding disorder ?	No. of students
Yes	180
No	20



**Figure 2:** Graphical analysis of table3

**Table 4:** Shows the tabulation of data for question2

If yes, what did you choose to do ?	No. of students
Sent the patients to get physician consent	125
Refused to treat the case	10
Referred the case to other dental clinics	40
Performed dental procedures without physicians consent	5



**Figure 3:** Graphical analysis of table4

**Table 5:** Shows the tabulation of data for question3

What kind of bleeding did you come order	No.of students
Cutaneous	45
Massive	155

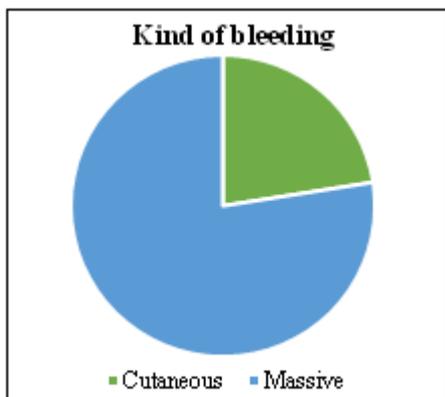


Figure 4: Graphical analysis of table5

Table 6: Shows the tabulation of data for question4

What kind of mucocutaneous bleeding did you come across?	No.of students
Petichae	30
Echimoses	20
Purpura	5
Subcutaneous hepatoma	40
Nose bleeds	105

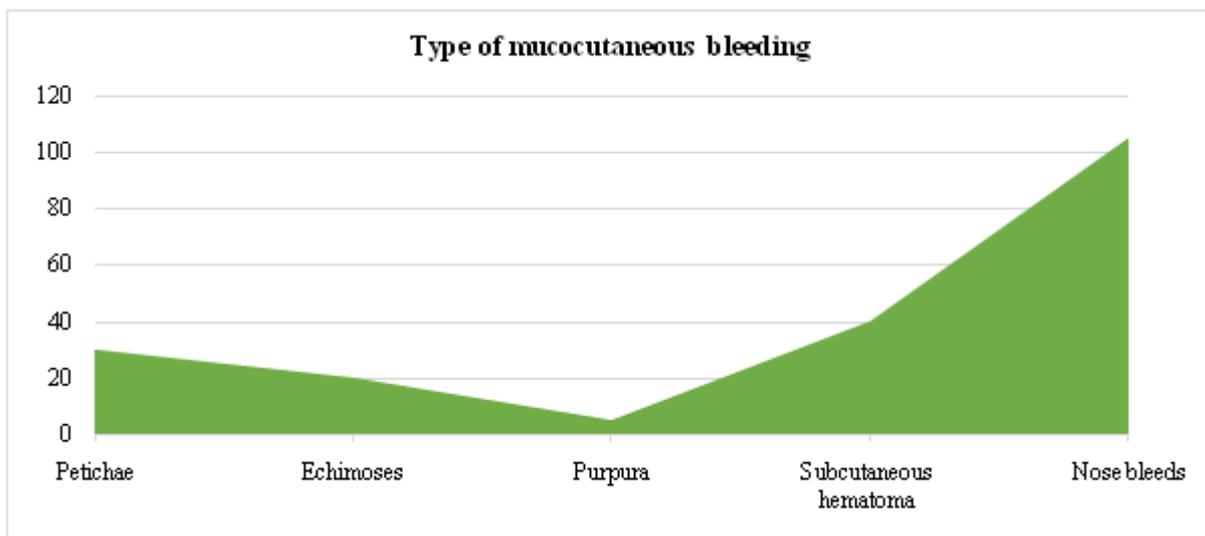


Figure 5: Graphical analysis of table6

Table 7: Shows the tabulation of data for question5

What kind of massive bleeding did you come across?	No.of students
Gum bleeding	84
Uncontrolled bleeding after extraction	99
Bleeding and swelling in joints	17

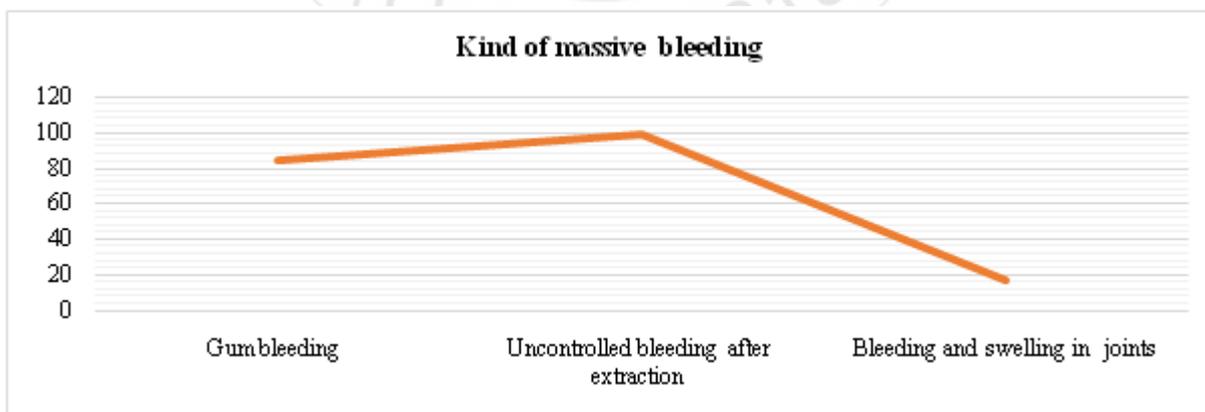
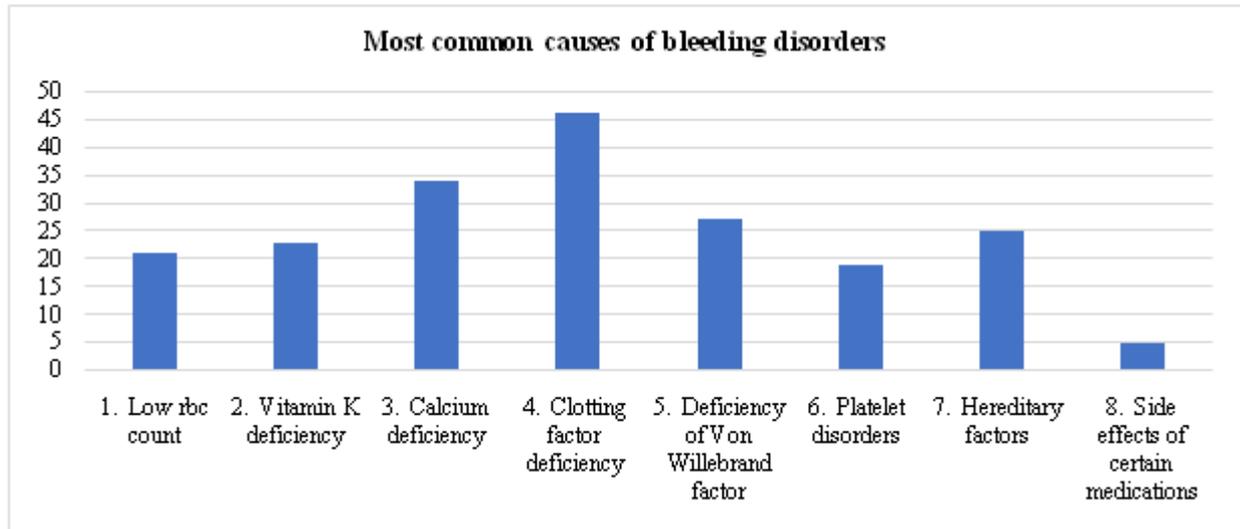


Figure 6: Graphical analysis of table7

**Table 8:** Shows the tabulation of data for question6

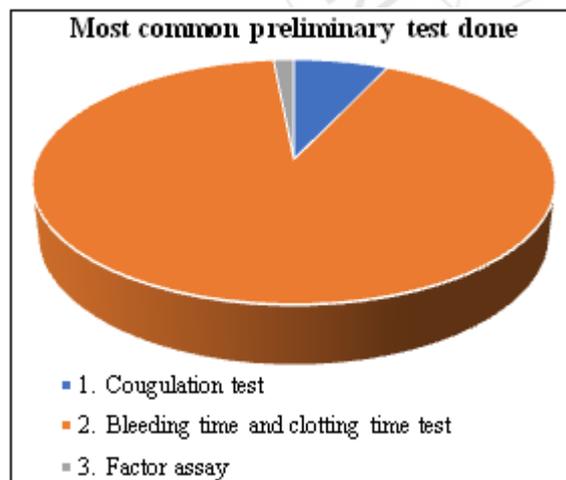
Most common causes you know of from patients with bleeding disorders?	No.of students
1. Low rbc count	21
2. Vitamin K deficiency	23
3. Calcium deficiency	34
4. Clotting factor deficiency	46
5. Deficiency of Von Willebrand factor	27
6. Platelet disorders	19
7. Hereditary factors	25
8. Side effects of certain medications	5



**Figure 7:** Graphical analysis of table8

**Table 9:** Shows the tabulation of data for question7

What is the most common test performed to do preliminary bleeding disorder testing?	No.of students
1. Coagulation test	14
2. Bleeding time and clotting time test	183
3. Factor assay	3



**Figure 8:** Graphical analysis of table9

**Table 10:** Shows the tabulation of data for question 8

	Excellent	Poor
Question 8	24	176

**Table 11:** Shows the tabulation of data for question 9

	No.of students	
	Excellent	Poor
Question 9	185	15

#### 4. Result

The extent to how the dentists treat patients with bleeding disorders progressively increases from interns to postgraduates then when compared to the fourth years This can be attributed to increased experience and attainment of knowledge about bleeding disorders and having treated many patients over the years . There was also no statistically significant difference between male and female under graduate dental student's knowledge regarding bleeding disorders .

#### 5. Discussion

This cross sectional study was conducted to assess the competence efficiency of dental students and post graduates on dealing with patients with bleeding disorders about 200 dental students were interviewed with a structured questionnaire .This study discusses mainly about how important it is for a dental student or a post graduate to know how much of a role bleeding disorders play while treating patients with them.Abnormal variations in bleeding time may lead to bleeding disorders. Most commonly acquired bleeding disorders are disseminated intravascular coagulation,Intraoperative metabolic abnormalities, Liver disease, Vitamin K deficiency . Some bleeding disorders are

inherited which are haemophilia and von Willebrand disease<sup>9</sup>.

Dentists or dental students must be well aware of bleeding disorders its conditions and its consequences during the management of patients because they may deal with patients in a regular basis who might have inherited or acquired bleeding disorders. The tests needed for assessment of bleeding disorders are demanded when the patients declare personal or familial record of bleeding in the past and/or symptoms of bleeding disorders are detected through the clinical examinations<sup>7</sup>.

In our study the main aim was to assess the knowledge among the post graduates and final years. From the results we were able to analyse that the knowledge level was significantly more and statistically differed between the final years and post graduates. The post graduates due to the increased exposure and hence more experience they were able to answer the survey better and hence had more knowledge this was attributed to the increased patient exposure and consecutive steps they would have performed to treat them even while taking into regard that they had bleeding disorder.

Among the study conducted it has been found that about 180 students had seen a patient with. Bleeding disorder according to table 3. About 70% of the students and post graduates when they encountered a patient with a bleeding disorder they sent them for the physicians consent and only almost 5 students preferred treating them without any help according to table 4. About 77.5% of the students and post graduates had a patient with a massive bleeding disorder. About 52.5% of the students and post graduates had a patient with a mucocutaneous bleeding which was mostly found to nose bleeds also about 5 students who took the the survey said that they experienced to treat a patient with purpura according to table 6. About 49.5% of the students and post graduates said that they had to treat a patient with massive bleeding such as uncontrolled bleeding after extraction and even a relatively high 42% of the students had to treat patients how had massive gum bleeding. And about 23% of the students and post graduates thought that clotting factor deficiency was one of the major causes for bleeding disorder in patients and calcium deficiency to be so according to table 8. About 91.5% of the students and post graduates conducted and thought that bleeding time and clotting time calculation is the preliminary test done for finding if a patient has a bleeding disorder.

There were two additional questions : one of them asked the students to arrange the procedures for appropriate order for the test done and only 20% of the students who took the survey were able to give the right answer while the rest were not sure and aware of the steps that were to be performed during the appropriate bleeding disorder test this can be attributed to the improper knowledge and instruction that were given to the students on treating patients with bleeding disorders.

The other question that was included to ask the students and what procedures and appropriate measures can be taken to treat the respective bleeding disorder in this question almost

92.5% of the students were able to answer correctly this can be attained due to the measure and proper instructions that could have been given by the teacher or physician to treat any patient with bleeding disorder .represented in table 11.

More over Since not much attention is being paid on the training of the students regarding bleeding disorders, knowledge on this aspect should be emphasised in the Undergraduate and post graduate dental curriculum and it should be made mandatory to students to attend continuing dental educational courses regarding management of the patients with bleeding disorders.

## 6. Conclusion

From this study we are able to conclude and say that appropriate knowledge on management of patients with bleeding disorders must be given in order for the dental students and post graduates to provide quality treatment and be able to treat them appropriately. Also since their knowledge on this concept is very optimal they must be given additional special training.

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